Electronic Supplementary Material (ESI) for Analytical Methods.

Flexible Cobalt Hexacyanoferrate/Carbon Cloth Nanocomposites for H_2O_2 Detection

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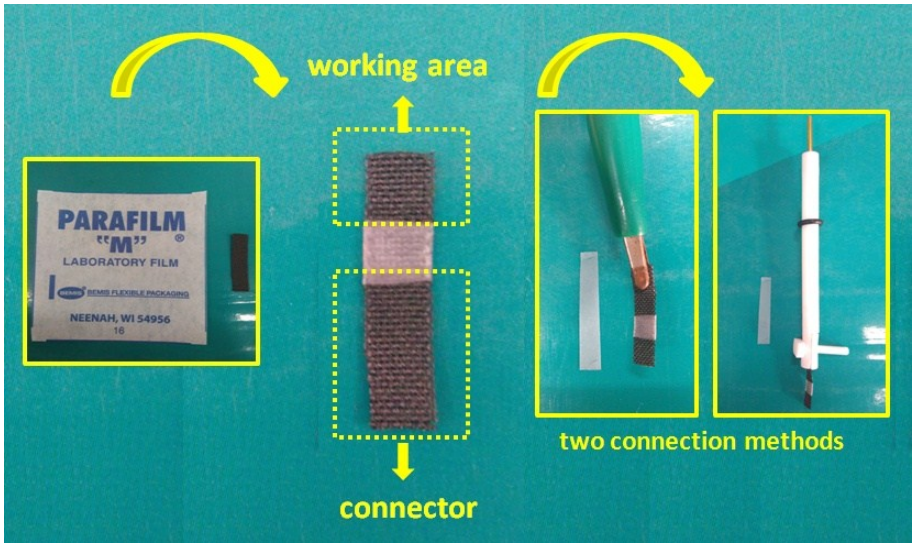

Fig. S1. Description of carbon cloth as a working electrode.

As shown in Fig. S1 (ESI^+), the CC was firstly cut into small pieces (about 0.5 cm × 2 cm), and then several nail polishes were dropped on the middle part of a piece of CC. After the nail polish dried, the middle part of CC was wrapped with parafilm. The role of parafilm and nail polish was isolating from the solution to ensure that only part of CC could contact with solution for further deposition and catalysis. One part (about 0.5 cm × 0.5 cm) contacted with solution was used as work electrode and the other end was used as connector to connect with electrochemical workstation.

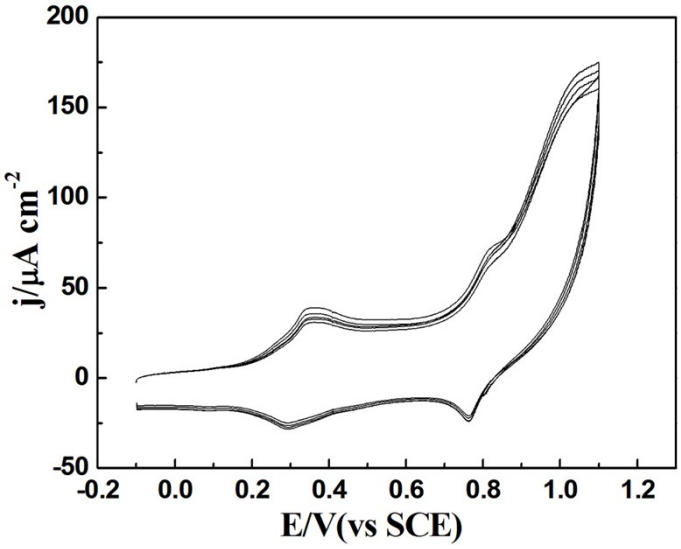

Fig. S2. The responses of five CC-CoCHF electrodes obtained under the same condition toward1.0 mM H_2O_2.

To evaluate the electrode-to-electrode reproducibility, five CC-CoCHF electrodes were prepared under the same condition. The responses of the five electrodes toward 1.0 mM H_2O_2 showed a RSD of 4.55 % (Fig. S2, ESI^+). The small RSD indicated good reproducibility of the electrode.

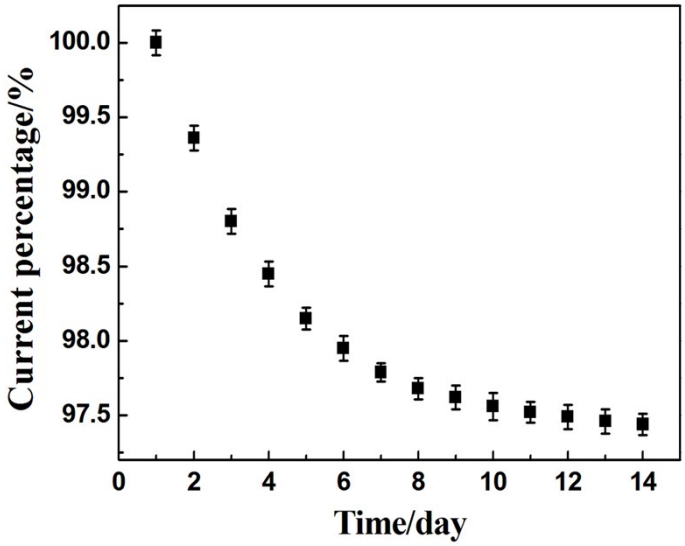

Fig. S3. Stability test of the CC-CoCHF electrode obtained under the same condition toward1.0 mM H_2O_2.

The stability of CC-CoCHF electrode was also explored in Fig. S3 (ESI^+). 97.5 % of the initial response was retained after it was stored in the refrigerator at 4 ºC over 14 days. The results indicated that the CC-CoCHF electrode was stable enough to be potentially used for detecting H_2O_2.